



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/595,231

03/28/2006

Dirk Kruse

03100291AA

5181

30743

7590

01/16/2009

WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C.

11491 SUNSET HILLS ROAD

SUITE 340

RESTON, VA 20190

EXAMINER

GREEN, ANTHONY J

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

01/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,231	Applicant(s) KRUSE ET AL.	
	Examiner Anthony J. Green	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 12, 18 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 12, 18 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendments after final submitted on 05 January 2009 have been entered.
2. In light of the discovery of new prior art, the finality of the rejection of the last Office action is withdrawn by the examiner and new rejections are lodged below.
3. Claims 11-12, 18 and 22 are pending in the application.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent Specification No. DE19826780 A.

The reference teaches, in the abstract, a flame retardant comprising a mixture of (A) silicic acid and (B) ammonium and/or alkali metal carbonate material having a volume median particle size of 1-40 preferably 2-15 microns. Component (B) is selected from potassium carbonate, sodium carbonate, lithium carbonate, ammonium carbonate and/or a corresponding hydrogen carbonate. The examiner has requested a formal written translation of the document, which will be forwarded to applicant once it is received by the examiner.

The instant claim is obvious over the reference as the reference provides the motivation to formulate the instant composition. Note that component (B) has a particle size ranging from 1-40 microns preferably 2-15 microns and may be selected from various mixtures of carbonates such as sodium carbonate (a salt) which, according to the instant specification, would meet the ceramic former and sodium hydrogen carbonate (a salt), which according to the instant specification, would meet the volume former. As for the limitation of “whereby in the event of heating, a volume of a layer formed by the fire-protection agent is increased by at least 500% in volume” this is an future use or ultimate utility and “Ultimate utility does not make a composition patentable. That is, the future use of a composition adds little or no patentable weight to a composition claim when the composition is the same (In re Pearson 181 USPQ 641). Patentability does not depend upon intended use (Ex parte Wikdahl 10 USPQ2d 1546).” Further it is believed that the composition of the reference would have this property because: “Products of identical composition may not have mutually exclusive properties. In re Spada 15 USPQ2d 1655,1658 (Fed. Circ. 1990).” Accordingly the instant claim is obvious over the reference.

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Conradie et al (US Patent No. 5,817,369 A).

The reference teaches, in claims 6 and 11 and inorganic solute selected from the group of wood preservative salts and flame retardant salts consisting of diammonium phosphate, monoammonium phosphate, ammonium chloride, ammonium sulphate,

Art Unit: 1793

borax, zinc chloride, orthophosphoric acid, boric acid, ammonium sulphamate, the hydrate of sodium oxyfluoroborate, ammoniacal basic zinc chloride, zinc octaborate, disodium octaborate tetrahydrate, ammonium biborate, ammonium pentaborate and mixtures of any two or more thereof.

The instant claim is rendered obvious over the reference as the reference provides the motivation to formulate the instant composition. Note that the claims recite that mixtures of any two or more of the salts may be utilized which includes borax (also known as disodium tetraborate), ammonium pentaborate and further ammonium chloride, which according to the applicant's instant specification, is an example of a volume former. As for the limitation of "whereby in the event of heating, a volume of a layer formed by the fire-protection agent is increased by at least 500% in volume" this is an future use or ultimate utility and "Ultimate utility does not make a composition patentable. That is, the future use of a composition adds little or no patentable weight to a composition claim when the composition is the same (In re Pearson 181 USPQ 641). Patentability does not depend upon intended use (Ex parte Wikdahl 10 USPQ2d 1546)." Further it is believed that the composition of the reference would have this property because: "Products of identical composition may not have mutually exclusive properties. In re Spada 15 USPQ2d 1655,1658 (Fed. Circ. 1990)." Accordingly the instant claim is obvious over the reference.

7. Claims 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent Specification No. 878520.

The reference teaches, in the machine translation, a composition for refractory coatings comprising inorganic fillers selected from at least silicon carbide and silica in particulate form (see paragraph 10 of the machine translation). The silicon carbide is present in a grain size of 1-15 microns and the composition further comprises a high disperse hydrophilic metal oxide selected from silica, titania or zirconia with a mean grain size from 0.01 to 2 microns. See also claim 1. Further the composition may further contain an alkali or alkaline earth, ammonium polyphosphate (a blowing agent or volume former), see claim 3 of the machine translation.

The instant claims are obvious over the reference. Since the composition of the reference is mixed together it is believed that this intimate association of the materials would result in the extremely small particle size hydrophilic metal oxide selected from silica, titania or zirconia essentially coating the other materials and thus rendering obvious the instant claims as this would result in a ceramic former and volume former that is essentially coated with the nanosized hydrophilic metal oxide. According the instant claims are obvious over the reference absent evidence showing otherwise.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over UK Patent Specification No. GB 2272444A.

The reference teaches, in the abstract and the claims, a non-halogen containing flame retardant comprising a salt of an inorganic phosphorus containing acid and a polymeric compound. The retardant may also comprise a second source of phosphorus different from said salt such as ammonium polyphosphate, melamine phosphate or red

Art Unit: 1793

phosphorus (see page 9 and claim 10 of the reference). Further according to page 10 of the reference the particle size of the salt and the second phosphorus source is in an average particle size of less than 80 microns, more preferably less than 40 microns.

The instant claims are obvious over the reference as the reference provides the motivation to formulate the instant composition. Note that the claims recite that a second source of phosphorus may be added such as ammonium polyphosphate or melamine phosphate (both believed to function as volume formers or blowing agents) which is believed to render obvious claim 12. As for the limitation of “whereby in the event of heating, a volume of a layer formed by the fire-protection agent is increased by at least 500% in volume” this is an future use or ultimate utility and “Ultimate utility does not make a composition patentable. That is, the future use of a composition adds little or no patentable weight to a composition claim when the composition is the same (In re Pearson 181 USPQ 641). Patentability does not depend upon intended use (Ex parte Wikdahl 10 USPQ2d 1546).” Further it is believed that the composition of the reference would have this property because: “Products of identical composition may not have mutually exclusive properties. In re Spada 15 USPQ2d 1655,1658 (Fed. Circ. 1990).”

9. Claims 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over UK Patent Specification No. GB 2272444A in view of Japanese Patent Specification No. JP04-249550A.

GB2272444A was discussed previously and further according to page 11, lines 21+, the flame retardant may be contain a surface treatment to increase the coupling between the flame retardant additive and the polymer host matrix.

Japanese Patent Specification No. JP04-249550 teaches, in the abstract, a flame retardant having a particle size of 50-100 microns that is coated with flame retardant polymers of at most 10 microns.

The instant claims are obvious over the reference as the reference provides the motivation to formulate the instant composition. Note that the claims recite that a second source of phosphorus may be added such as ammonium polyphosphate or melamine phosphate (both believed to function as volume formers or blowing agents) which is believed to render obvious claim a composition comprising ceramic formers and volume formers. As for the limitation of “whereby in the event of heating, a volume of a layer formed by the fire-protection agent is increased by at least 500% in volume” this is an future use or ultimate utility and “Ultimate utility does not make a composition patentable. That is, the future use of a composition adds little or no patentable weight to a composition claim when the composition is the same (In re Pearson 181 USPQ 641). Patentability does not depend upon intended use (Ex parte Wikdahl 10 USPQ2d 1546).” Further it is believed that the composition of the reference would have this property because: “Products of identical composition may not have mutually exclusive properties. In re Spada 15 USPQ2d 1655,1658 (Fed. Circ. 1990).” While the reference does not specifically recite that the flame retardant is coated with nanoparticles it does teach that a surface treatment may be added and accordingly one of ordinary skill in the art would

Art Unit: 1793

have found it obvious to utilize any coating of any particle size without producing any unexpected results because “a person of ordinary skill has good reason to pursue the known options with his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” That is, it would have been obvious to utilize coating materials of a smaller size than the particles that are coated, see the secondary reference while teaches the coating of larger particles of a flame retardant with a material of a smaller particle size. Further the claims would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art and because the design incentives or market forces provided a reason to make an adaptation, and the invention resulted from application of the prior knowledge in a predictable manner. Accordingly the instant claims are obvious over the reference absent evidence showing otherwise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Green whose telephone number is 571-272-1367. The examiner can normally be reached on Monday-Thursday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anthony J. Green/

Primary Examiner
Art Unit 1793

ajg
January 15, 2009